

SECTION 3.9

Indian Trust Assets

3.9 Indian Trust Assets

3.9.1 Introduction and Summary

This section addresses existing Indian Trust Assets (ITAs) in the LCR, Salton Sea, and CVWD service area geographic subregions and potential impacts to ITAs associated with the implementation of federal components of the Proposed Project: (1) Reclamation's approval of the change in the point of diversion of up to 300 KAFY of Colorado River water conserved by IID (this action has the potential to affect ITAs along the LCR); and (2) USFWS' approval of an Incidental Take Permit, under Section 10 of the ESA (this action has the potential to affect ITAs in the IID water service area and AAC and Salton Sea geographic subregions).

ITAs are legal assets associated with rights or property held in trust by the US for the benefit of federally recognized Indian Tribes or individuals. The US, as trustee, is responsible for protecting and maintaining rights reserved by, or granted to, Indian Tribes or individuals by treaties, statutes, and executive orders. All federal bureaus and agencies share a duty to act responsibly to protect and maintain ITAs. Reclamation's policy is to protect ITAs from adverse impacts resulting from its programs and activities whenever possible. Reclamation, in cooperation with Tribe(s) potentially impacted by a given Project, must inventory and evaluate assets, and then mitigate, or compensate, for adverse impacts to the asset. While most ITAs are located on a reservation, they can also be located off-reservation. Examples of ITAs include lands, minerals, water rights, and hunting and fishing rights.

ITAs include property in which a Tribe has legal interest. For example, tribal entitlements to Colorado River water rights established in each of the Basin States pursuant to water rights settlements are considered trust assets, although the reservations of these Tribes may or may not be located along the River. A Tribe may also have other off-reservation interests and concerns that must be taken into account.

Potential effects from CVWD's receipt and use of the conserved water within the CVWD service area under the Proposed Project (QSA Implementation scenario) are assessed programmatically in this EIR/EIS. The potential effects are addressed as part of an overall assessment of CVWD's Coachella Valley Water Management Plan in a PEIR prepared by CVWD (CVWD June 2002) (see Section 1.5.4). The description of potential effects to ITAs (specifically to groundwater) from CVWD's proposed receipt and use of the conserved water in this section is based on information made available by CVWD regarding their planned use of water.

ITA impacts in the IID water service area and AAC geographic subregion are not evaluated in this section because this subregion does not contain any reservation lands or ITAs. ITA impacts in the SDCWA and MWD service area geographic subregions are also not evaluated in this section because no construction or operation of new facilities will occur in these subregions.

Section 3.9.2 describes the applicable regulations and standards that pertain to ITAs. Section 3.9.3 presents the ITA characteristics. Table 3.9-1 below presents a summary of the potential ITA impacts that could result from implementation of the Proposed Project and/or Alternatives.

TABLE 3.9-1
Summary of Indian Trust Assets Impacts¹

Proposed Project: 300 KAFY All Conservation Measures	Alternative 1: No Project	Alternative 2: 130 KAFY On-farm Irrigation System Improvements Only	Alternative 3: 230 KAFY All Conservation Measures	Alternative 4: 300 KAFY Fallowing Only
LOWER COLORADO RIVER				
No impact.	Continuation of existing conditions.	No impact.	No impact.	No impact.
IID WATER SERVICE AREA AND AAC				
No impact.	Continuation of existing conditions.	No impact.	No impact.	No impact.
SALTON SEA				
Impact ITA-1: Exposure of Torres Martinez tribal lands as a Result of Sea level decline of about 5 to 15 feet after year 2035. With implementation of the HCP-SS the decline would be 5 feet by year 2077.	Continuation of Baseline conditions, including Sea level decline of about 7 feet.	Impact A2-ITA-1: Exposure of Torres Martinez tribal lands as a Result of Sea level decline of about 7 feet after year 2035.	Impact A3-ITA-1: Exposure of Torres Martinez tribal lands as a Result of Sea level decline of about 4 to 12 feet after year 2035.	Impact A4-ITA-1: Exposure of Torres Martinez tribal lands as a Result of Sea level decline of up to 6 feet after year 2035.
SDCWA Service Area				
No impact.	Continuation of existing conditions.	No impact.	No impact.	No impact.
CVWD Service Area				
Impact ITA-2: Potential adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD's proposed recharge of higher TDS Colorado River water.	Continuation of existing conditions.	No impact.	Same as ITA-2.	Same as ITA-2.

TABLE 3.9-1
Summary of Indian Trust Assets Impacts¹

Proposed Project: 300 KAFY All Conservation Measures	Alternative 1: No Project	Alternative 2: 130 KAFY On-farm Irrigation System Improvements Only	Alternative 3: 230 KAFY All Conservation Measures	Alternative 4: 300 KAFY Fallowing Only
Impact ITA-3: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD's proposed recharge of Colorado River water, which contains low levels of perchlorate.	Continuation of existing conditions.	No impact.	Same as ITA-3.	Same as ITA-3.
MWD Service Area				
No impact.	Continuation of existing conditions.	No impact.	No impact.	No impact.

¹ Programmatic level analysis of USFWS' biological conservation measures in LCR subregion is not summarized in the table because no significance determinations have been made. Subsequent environmental documentation will be required if potential impacts are identified.

Reclamation sent a memorandum to 55 Indian Tribal representatives on April 26, 2001, inviting them to enter into government-to-government coordination pursuant to CEQ regulations for implementing the procedural provisions of NEPA (40 C.F.R. Part 1501); the National Historic Preservation Act; and Executive Order 13175 of November 6, 2000, pertaining to consultation and coordination with Indian tribal governments. The Tribes contacted were those along the LCR and other Tribes within the Project's region of influence in California and Arizona. Reclamation met with CRIT staff to discuss potential impacts to the CRIT from the Proposed Project, and provided a grant to CRIT for technical assistance in review of hydropower impacts from reductions in Colorado River flow below Parker Dam. At CRIT's request, a formal government-to-government consultation meeting will not occur until after this review has been completed. Reclamation and USFWS have also met with the Torres Martinez Band of Cahuilla Indians on a government to government basis regarding potential impacts to the Tribe's resources. USFWS sent a letter to five Tribes located in the Coachella Valley offering assistance regarding the water transfer agreements and HCP. Based on meetings and discussions among the Tribes, US Bureau of Indian Affairs (BIA), USFWS, and Reclamation staff, this section describes ITAs that have the potential to be impacted by the federal actions associated with the Proposed Project (Reclamation 2002).

3.9.2 Regulatory Framework

3.9.2.1 Federal Standards and Regulations

As stated above in Section 3.9.1, Reclamation's policy is to protect ITAs from adverse impacts of its programs and activities whenever possible.

3.9.3 Existing Setting

The following section provides a description of Tribes within the LCR, Salton Sea, and CVWD service area geographic subregions.

3.9.3.1 Lower Colorado River

FORT MOJAVE INDIAN TRIBE

The Fort Mojave Indian Reservation is located in the Lower Basin of the Colorado River where Nevada, Arizona, and California meet. The Tribe possesses PPRs from the mainstem of the Colorado River in all three of the states that contain reservation land, pursuant to the Decree and supplemental Decrees (1979, 1984, and 2000). Since the original Decree was entered in 1964, 1,570 acres of land have been added to the reservation, including 1,102 acres in Arizona and 468 acres in California. Fort Mojave Tribe water rights, including added lands, priority dates, and state where the water rights are perfected, are in Table 3.9-2.

TABLE 3.9-2
Fort Mojave Tribe's Water Rights

State	Amount (AFY)	Acreage (acres)	Priority Date
Arizona	27,969	4,327	September 18, 1890
Arizona	75,566	11,691	February 2, 1911
Arizona Subtotal	103,535	16,018	
California	16,720	2,587	September 18, 1890
Nevada	12,534	1,939	September 18, 1890
Total	132,789	20,544	

In its June 19, 2000 Opinion, the US Supreme Court accepted the Special Master's uncontested recommendation and approved the proposed settlement of the dispute respecting the Fort Mojave Indian Reservation. Under the settlement, the Tribe is awarded the lesser of an additional 3,022 AF of water or enough water to supply the needs of 468 acres. The Tribe's amended PPR for reservation lands located in California is set forth in the supplemental Decree entered by the US Supreme Court on October 10, 2000.

CHEMEHUEVI TRIBE

The Chemehuevi Indian Reservation is located in southern California on the plateau above the shoreline of Lake Havasu. The Tribe possesses PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The Chemehuevi Indian Tribe's water rights, priority dates, and state where the rights are perfected, are as presented in Table 3.9-3.

TABLE 3.9-3

Chemehuevi Indian Tribe's Water Rights

State	Amount (AFY)	Acreage (acres)	Priority Date
California	11,340	1,900	February 2, 1907

COLORADO RIVER INDIAN TRIBES

The Colorado River Indian Reservation is located in southwestern Arizona and Southern California south of Parker, Arizona. The Tribes possess PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The amounts, priority dates, and state where the rights are perfected are presented in Table 3.9-4.

TABLE 3.9-4

Colorado River Tribe's Water Rights

State	Amount (AFY)	Acreage (acres)	Priority Date
Arizona	358,400	53,768	March 3, 1865
Arizona	252,016	37,808	November 22, 1873
Arizona	51,986	7,799	November 16, 1874
Arizona Subtotal	662,402	99,375	
California	10,745	1,612	November 22, 1873
California	40,241	6,037	November 16, 1874
California	5,860	879	May 15, 1876
California Subtotal	56,846	8,528	
Total	719,248	107,903	

QUECHAN INDIAN TRIBE

The Fort Yuma Indian Reservation (Quechan Indian Tribe) is located in southwestern Arizona and Southern California near Yuma, Arizona. The Tribe possesses PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The amount, priority date, and state where the rights are perfected are as presented in Table 3.9-5.

TABLE 3.9-5

Quechan Indian Tribe's Water Rights

State	Amount (AFY)	Acreage (acres)	Priority Date
California	51,616	7,743	January 9, 1884

A US Supreme Court decision issued on June 19, 2000 allows the Tribe to proceed with litigation to claim rights to an additional 9,000 acres of lands that are irrigated. Proving this claim would increase the water rights for the reservation.

COCOPAH INDIAN TRIBE

The Cocopah Indian Reservation is located in southwestern Arizona near Yuma, Arizona. The Tribe possesses PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). Since the original Decree was entered in 1964, 775 acres of land were added to the reservation. The amounts, priority dates, and state where the rights are perfected are presented in Table 3.9-6.

TABLE 3.9-6
Cocopah Indian Tribe's Water Rights

State	Amount (AFY)	Acreage (acres)	Priority Date
Arizona	7,681	1,206	September 27, 1917
Arizona	2,026	318	June 24, 1974
Arizona	1,140	190	1915
Total	10,847	1,714	

The rights listed above include only that water diverted directly from the Colorado River at Imperial Dam. In addition to these rights, the Tribe has numerous well permits that divert groundwater that may be connected to the Colorado River within the boundaries of the US (studies are ongoing). The 1974 PPR for the Cocopah Indian Reservation is unique because of its more recent priority date. The 1979 supplemental Decree specifies that in the event of a determination of insufficient mainstream water to satisfy PPRs pursuant to Article II (B) (3) of the 1964 Decree, the PPRs set forth in paragraphs (1) through (5) of Article II (D) of the Decree must be satisfied first.

The 1984 supplemental Decree recognized the PPR for the Cocopah Indian Reservation dated June 24, 1974, and amended paragraph (5) of Article II (D) of the Decree to reflect this 1974 right. The Tribe is involved in litigation to claim rights to a total of 2,400 acres of lands that are irrigated. Proving this claim would further increase the water rights for the reservation.

The US Supreme Court, in its 1979 supplemental decree, indicated that in the event the boundaries of the Fort Mojave, Chemehuevi, CRIT, Fort Yuma (Quechan Tribe), and Cocopah Indian Reservations are finally determined, the quantities of diversions for those respective reservations are to be computed by determining the net practicably irrigable acres for each reservation and multiplying that number times a unit diversion quantity of AF per irrigated acre for each reservation. The unit diversion quantity for each reservation is presented in Table 3.9-7.

TABLE 3.9-7
Unit Diversion Quantity

Indian Reservation	AF Per Acre Irrigated
Cocopah	6.37
CRIT	6.67
Chemehuevi	5.97
Fort Mojave	6.46
Fort Yuma	6.67

3.9.3.2 Salton Sea

TORRES-MARTINEZ DESERT CAHUILLA INDIANS

The Salton Sea covers approximately 40 percent of the Torres Martinez Reservation. In 1993, the 220,000-acre Salton Sea was officially designated as an impaired water body after the California conducted a water quality assessment. The results of the assessment revealed that salinity, selenium in fish tissue, recreational impacts, and non-point source pollution each contributed to unhealthy contamination levels.

The Torres Martinez Reservation is located on about 24,000 acres along the northern shore of the Salton Sea. The Sea currently inundates about 11,800 acres of the reservation. The Torres Martinez Indians have sought damages and compensation for lands claimed to be inundated or damaged by the Salton Sea. In 1996, a Settlement Agreement was reached to provide compensation to the Tribe and provide a permanent flowage easement to IID and CVWD over the Indian Trust lands. The issue was resolved when legislation required to implement the settlement was passed in 2001 as Title VI of Public Law 106-568 (Torres Martinez Desert Cahuilla Settlement Claims Act).

The US holds the Tribe's existing water rights in trust. In 1908, the US Supreme Court (*Winters v. US*, 207 US 564) ruled that when Congress created Indian reservations, water rights needed to develop and support these reservations were reserved. The Winters Doctrine has been extended by rulings of the US Supreme Court to include groundwater rights as well as surface water rights. Additional federal and state-reserved water rights are provided through Executive Orders, Supreme Court decisions, statutes and regulations, all of which may apply to the Torres Martinez Reservation (Reclamation and SSA 2000).

No specific hunting or fishing rights other than those granted to all citizens with proper permits from CDFG have been identified in the subregion. CDFG regulates hunting and fishing in and around the Salton Sea, except within the Torres Martinez Indian Reservation, where the Tribe is the primary regulatory and management authority. Significant gold deposits have been located on the Torres Martinez Reservation and are considered an ITA. The Torres Martinez Indians have indicated that they consider cultural resources located within the Torres Martinez Reservation to be ITAs (Reclamation and SSA 2000). While Reclamation policy does not consider prehistoric and historic sites to be ITAs, Reclamation will treat such resources as ITAs if they are located on reservation lands and the Tribe requests the sites are treated as such. Currently, approximately 70 archaeological resources are known to exist on the Torres Martinez Reservation (Reclamation and SSA 2000).

Cultural resources located off-reservation are unlikely to be considered trust assets of the Torres Martinez Band.

The Salton Sea is considered by the Tribe to be one of its most precious natural resources. The Tribe has deep cultural, religious, and natural resource management connections to the Salton Sea, and to its fish and wildlife resources. The Tribe has been working with Reclamation to identify funding for a wetland habitat pilot project. The pilot project would be located on Tribal lands along the shore of the Salton Sea, and would be designed to enhance habitat for shorebirds and other avian and aquatic species.

3.9.3.3 CVWD Service Area

AGUA CALIENTE BAND OF CAHUILLA INDIANS

The Agua Caliente Band of Cahuilla Indians is Cahuilla affiliated, with about 300 Tribal members and a Tribal Office in Palm Springs, California. The Agua Caliente Reservation was named for the Agua Calientes mineral springs and is located in, and adjacent to, the City of Palm Springs. Approximately 40,000 people reside on the Tribal lands that are situated in a checkerboard pattern throughout the area.

Rainfall and snow melt from the mountain regions of the Agua Caliente Reservation causes perennial and intermittent stream flow in surrounding canyons. These canyon streams eventually discharge to the Whitewater River channel downstream of its diversion point. Groundwater-bearing formations are in the eastern desert valley portion of the Reservation, and include unconsolidated alluvial deposits overlying Ocotillo conglomerate, the main water-bearing formation in the Coachella Valley. Groundwater evidence can also be seen in mineral springs at several locations.

Presently, more water is extracted from the groundwater basin than is recharged through rain or run-off. This situation creates a dangerous overdraft condition in an already arid region. Approximately two miles north of the Agua Caliente Reservation, Colorado River water is released to spreading basins in the Whitewater River channel in an effort to recharge groundwater in the upper Coachella Valley.

AUGUSTINE BAND OF MISSION INDIANS

The Augustine Band of Mission Indians is Cahuilla affiliated and has a population of 5 Tribal members. The Augustine Reservation is situated in the lower Coachella Valley with tribal offices located in Coachella, California. The Augustine Band of Mission Indians was established by Executive Order on December 29, 1891. The original Augustine Membership Roll of 11 persons was prepared and approved by the Commissioner of Indian Affairs on April 13, 1956. The last surviving member, Roberta Ann Augustine, died on May 9, 1987, leaving three children and two grandchildren. Maryann Martin, one of her descendants, is the current Tribal Chairperson and resides on the Augustine Reservation.

Groundwater on the reservation is confined or partially confined by impermeable clay lenses that cause horizontal groundwater flows and result in semi-perched conditions. Irrigation water used to flush salts from the soil in this highly productive agricultural area further contributes to the semi-perched conditions. The lower aquifer of Ocotillo conglomerate serves as the primary water bearing formation in the Coachella Valley.

CABAZON BAND OF MISSION INDIANS

The Cabazon Band of Mission Indians is Cahuilla affiliated and despite the name, was never under the control of the Spanish mission system. Today there are fewer than 50 members of the Cabazon tribe, though the reservation itself covers 1,450 acres in parcels spread over 16 miles in the Coachella Valley, near the City of Indio and 22 miles east of Palm Springs. The largest parcel contains the tribal administration office, the Public Safety Department and several business enterprises. Due to the proximity of the Salton Sea to their reservation, the Cabazon Tribe is interested in the health and revitalization of the Salton Sea and surrounding wetlands.

MORONGO BAND OF MISSION INDIANS

The Morongo Band of Mission Indians is Cahuilla affiliated and has a population of 900, with Tribal Offices in Banning, California. The Morongo Reservation is situated in the foothills of the San Bernardino Mountains at the upstream end of the Whitewater River Watershed.

Perennial and intermittent stream flow, wetlands, and springs on the Morongo Reservation are fed from mountain rainfall and snow melt in the San Bernardino Mountains. Due to the close proximity of the San Andreas Fault system, the Morongo Tribe is involved in several projects to study the relationship between fault movement and changes in local hydrology. Variations in the volume and intensity of stream and spring flows have been observed prior to seismic activity in the region. Theoretically, faults could act as groundwater barriers causing groundwater to surface in springs and contributing to increased stream flow.

TWENTY-NINE PALMS BAND OF MISSION INDIANS

The affiliation of the Twenty-Nine Palms Tribal members is Chemheuvi. There are fourteen tribal members and the Tribal Offices are located in Coachella, California. The Reservation is situated on a 150-acre parcel in the Coachella Valley and a 160-acre parcel in Twenty-Nine Palms near the Joshua Tree National Monument.

The Whitewater River Channel runs through the Twenty-Nine Palms Reservation and is referred to as the Coachella Valley Stormwater Channel in the lower Coachella Valley. The channel conveys flow from wastewater plant discharges, agricultural drainage systems, and large rainfall events to the Salton Sea. Due to violations of bacterial water quality objectives and the threat of toxic bioassay results, the channel is on the Clean Water Act Section 303 (d) list of impaired surface waters.

3.9.4 Impacts and Mitigation Measures

3.9.4.1 Methodology

The federal actions proposed by USFWS and Reclamation associated with the Proposed Project and Alternatives were reviewed to determine whether their implementation would result in adverse effects on ITAs. The evaluation of ITA impacts within the CVWD service area was conducted in response to comments received on the Draft EIR/EIS from U.S. EPA, BIA, and the Torres Martinez Tribe.

Subregions Excluded From Impact Analysis. The IID water service area and AAC geographic subregion is not discussed in this section because it does not contain Indian reservation

lands or ITAs. In addition, as described in Section 3.9.1 above, the SDCWA and MWD service area geographic subregions were also excluded from the analysis.

3.9.4.2 Proposed Project

LOWER COLORADO RIVER

Water Conservation and Transfer

There would be no significant, adverse impact to ITAs from approval of the water transfers and change in point of diversion from the Colorado River. Hunting and fishing rights, tribal lands, cultural resources, and tribal water rights would not be affected.

The change in the water diversion point could result in reduced flows between Parker Dam and Imperial Dam. The riparian and marsh resources along the Colorado River are important to many Native American tribes. CRIT has an ongoing riparian restoration program along the River and has expressed concern that the potential reduction in Colorado River water surface elevation could affect its ability to divert water for the restoration program. The fluctuation in water surface elevations that would result from changes in the point of diversion would be within the historic variations experienced on the River. For this reason, CRIT's ability to divert water from the Colorado River should not vary from what has occurred in the past. It is anticipated that the biological conservation measures identified to reduce the impact to sensitive species and riparian /aquatic habitats, some of which could be implemented on tribal lands if agreed to by the Tribe, would also mitigate any impact to biological resources within tribal lands.

The results of the analysis by Reclamation (2002) indicates that salinity levels at Imperial Dam would increase as compared to the Baseline. This change in salinity would have the potential to affect tribal lands located along the Colorado River between Parker Dam and Imperial Dam. However, this increase falls within the normal range of fluctuations that occur along the reach. Further, mitigation in the form of additional salinity control projects would ensure that water quality targets established by the Salinity Control Forum would not be exceeded.

Biological Conservation Measures in USFWS' Biological Opinion

Construction of biological conservation measures has the potential for short-term, localized impacts associated with construction of habitat restoration sites. Although these effects could occur on tribal lands, they would not be substantial and would be short-term in duration. In addition, implementation of the biological conservation measures could convert some lands from agricultural use to backwaters or cottonwood-willow habitat. These habitat areas could be constructed on tribal lands. However, because the lands would only be provided by willing landowners, this conversion would not result in an adverse effect on tribal land uses (Reclamation 2002).

SALTON SEA

Water Conservation and Transfer

Impact ITA-1: Exposure of Torres Martinez tribal lands from reduced inflow to Salton Sea as a result of Sea level decline of about 5 to 15 feet after year 2035. Under the Proposed Project, reduced inflow would cause the Sea to decline to about elevation -250 feet msl by the year 2077, compared to the Baseline elevation of -235 feet msl (a decline of about 15 feet

compared to the Baseline), assuming only on-farm or water delivery system measures are used to conserve water for transfer. Under the Proposed Project, assuming only fallowing is used to conserve water for transfer, the Sea's elevation is projected to be -241 feet msl; a decline of about 6 feet compared to the Baseline.

Implementation of the Salton Sea Habitat Conservation Strategy would maintain the elevation of the Salton Sea at Baseline levels until the year 2035. This approach would also maintain the amount of exposed shoreline at Baseline levels until 2035. Beyond the year 2035, the Sea's elevation would decline to about -240 feet msl, exposing about 15,100 acres by the year 2077, as compared to the Baseline. As described in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of mitigation water could be used, but they have not been evaluated in this EIR/EIS, as described in Section 2.2.6.7.

Additionally, under the Proposed Project, the implementation of the Salton Sea Habitat Conservation Strategy in concert with the on-farm irrigation system improvement approach to conserving water for transfer was determined not to be feasible because of the number of total acres that would be needed. This is because the "efficiency conservation" measures require a 1 to 1 ratio of mitigation water to the Sea. Therefore, the combination of only on-farm and/or delivery system efficiency conservation measures required to produce 300 KAFY for transfer plus fallowing within the IID water service area as the sole method of providing the mitigation water associated with the Salton Sea Habitat Conservation Strategy has not been assessed in this final EIR/EIS.

Sea level decline would result in the exposure of Tribal land that has been inundated by the Salton Sea. These exposed lands contain natural and cultural resources that are considered by the Torres Martinez to be ITAs. Exposure could result in adverse impacts to cultural resources from vandalism and erosion. Potential beneficial impacts could result from allowing scientific investigations of exposed resources, including archaeological data collection and natural resource exploitation. However, flowage easements held over these lands by CVWD and IID would severely limit most economic development opportunities.

Because of their cultural, religious, and natural resource management connections to the Salton Sea, and to its fish and wildlife resources, the Tribe is concerned with any impact to the fishery resource or recreational economy from Project-related impacts. The Tribe has expressed concern about increases in wind-blown dust from the exposure of lands previously inundated by the Salton Sea. Although air is not considered an ITA as defined by DOI (303 DM 2, Section 2.5(C)), it is analyzed in this section because air quality is an issue of importance to the Tribe. In the most extreme case, about 78 square miles of additional lands would be exposed as a result of the Proposed Project.

The Torres Martinez also have expressed concerns that exposed land might be spoiled by salts, DDT, or other contaminants in the soils. In 1999, Levine-Fricke conducted a comprehensive study to evaluate sediments underlying the Salton Sea, collecting sediment samples at seventy-three locations in the Salton Sea and its three main tributaries (Levine-Fricke 1999). The study found concentrations of cadmium, copper, molybdenum, nickel, zinc, selenium in the seabed sediment at levels that exceeded maximum baseline concentrations for soils in the western US. The Levine-Fricke study also found that organic

chemicals commonly used in agriculture in previous years were not detected at elevated concentrations in the sediment. These chemicals include DDT, many semivolatile organic compounds, chlorinated pesticides and PCBs, organophosphate and nitrogen pesticides, and chlorinated herbicides.

Mitigation Measure ITA-1:

Cultural Resources – Potential impacts from vandalism of exposed cultural resources could be mitigated by control of public access on exposed tribal lands. As part of the air quality mitigation package, IID is proposing to restrict public access (particularly off-road vehicle use) on exposed soils to the extent practicable and legally possible. IID would cooperate with the Tribe to restrict access to exposed reservation lands if desired by the Tribe.

Fish and Wildlife Resources – With implementation of the Salton Sea Habitat Conservation Strategy, salinity levels in the Salton Sea would be maintained at or below Baseline levels through approximately year 2035. This would maintain the fishery resource for as long as expected under Baseline conditions, so there would be no impact on the recreational fishery at the Sea.

Air Quality – Implementation of the Salton Sea Habitat Conservation Strategy would maintain the elevation of the Salton Sea at Baseline levels until the year 2035. This approach would also maintain the amount of exposed shoreline at baseline levels until 2035. Beyond the year 2035, the Sea's elevation would decline to about -240 feet msl, exposing about 15,100 acres by the year 2077, as compared to the Baseline. In addition, a four-step air quality mitigation plan has been developed by IID to address the potential for increased wind-blown dust (see Section 3.7, Air Quality). With implementation of the mitigation plan, the impact on air quality from exposed Salton Sea lands after year 2035 would be substantially reduced. However, because of the potential for interim impacts (between the time monitoring identifies a problem and implementation of the treatment) and uncertainty regarding with the cost and feasibility of treatment options, this EIR/EIS concludes that air quality impacts will be significant and unavoidable.

Health Effects from PM₁₀ Particle Composition – Sufficient data do not exist to pinpoint the locations and extent of elevated metals concentrations in the exposed Salton Sea shoreline sediment. Therefore, a meaningful health risk assessment is not possible at this time. However, because the potential does exist for incremental health risks under the Proposed Project, the air quality monitoring and mitigation plan for the Proposed Project includes the following steps to minimize the potential for health risks:

- Collect additional sediment samples
- Monitor emissions from exposed shoreline
- Monitor airborne concentrations
- Assess potential health risks if necessary
- Apply mitigation if necessary

These five steps are potentially sufficient to suppress the potential for Project-generated health effects from toxic compounds in PM₁₀ to less-than-significant levels. However, a level of uncertainty remains regarding whether short-term and long-term air quality impacts and related health effects associated with exposed shoreline can be mitigated to a less-than-significant level. Therefore, this EIR/EIS conservatively concludes that air quality impacts,

which include possible health effects, as described above, are potentially significant and unavoidable.

Salton Sea Habitat Conservation Strategy (HCP-SS)

The Salton Sea Habitat Conservation Strategy would maintain inflows to the Sea at or above Baseline levels until approximately year 2030, thereby avoiding any potential Project-related impacts to ITAs until 2035 when the elevation of the Sea would decline below the projected Baseline elevation. After that time, reduced inflows could expose portions of the Salton Sea shoreline as described above under “Water Conservation and Transfer.” By 2077, the Sea’s elevation is projected to decline to –240 feet msl. As described in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

CVWD SERVICE AREA

Water Conservation and Transfer

Impact ITA-2: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD’s proposed recharge of higher TDS Colorado River water. As stated above, the potential effects within the CVWD service area are related to local actions and decisions made by CVWD and are assessed in the Coachella Valley Water Management Plan PEIR. Nevertheless, an evaluation of potential adverse effects on ITAs, which could occur as a result of the Proposed Project (QSA Implementation scenario), was conducted to provide a programmatic assessment. The only potential impact to ITAs from delivery of 100 KAFY of Colorado River water to CVWD’s Improvement District No. 1 under the Proposed Project’s second implementation scenario (QSA Implementation) would be impacts to groundwater resources.

Groundwater recharge with Colorado River water would have a number of beneficial impacts on groundwater in the Lower Coachella Valley including increased water levels, reduced pumping lifts, reduced risk of land subsidence, prevention of groundwater quality degradation from percolating agricultural drainage, and reduced potential for salt water intrusion from the Salton Sea. However, recharge with Colorado River water is anticipated to have an adverse impact on the quality of groundwater extracted near the recharge basins in the Lower Coachella Valley because Colorado River water typically has higher concentrations of TDS and other chemical constituents than the local groundwater currently does. Wells located up to 2 to 3 miles down-gradient of the proposed CVWD recharge sites are most likely to experience elevated TDS compared to existing conditions during the 75-year evaluation period. Groundwater quality near the recharge basins would gradually change over time and may approach the quality of Colorado River water in the affected areas. Since the TDS of the local groundwater in portions of the basin is higher than Colorado River water, the magnitude of the water quality change varies with location. The anticipated TDS increase would not impair any beneficial uses of the water, as defined by established state and federal primary (or health-based) drinking water standards. The higher salinity could exceed recommended secondary water quality standards that deal with aesthetics, such as taste and hardness.

Water quality changes due to recharge with Colorado River water would only affect the groundwater supply of the Torres Martinez Tribe in the lower Valley and the Agua Caliente in the upper Valley. The Torres Martinez Tribe has two production wells located near one of the potential CVWD recharge sites. The Torres Martinez wells are projected to be impacted within about 20 years after recharge commences. The Agua Caliente Tribe's wells would also be affected. The wells of the Augustine, Cabazon and Twenty-Nine Palms tribes would not experience water quality changes within the 75-year Project term because their wells are located too far from the proposed recharge facilities. The wells of the Morongo Tribe would not be affected by groundwater recharge because they are located up-gradient from any Colorado River water deliveries associated with the Proposed Project (CVWD June 2002).

Mitigation Measure ITA-2: Mitigation to reduce the higher TDS of Colorado River water to the equivalent quality of groundwater was evaluated and found to be financially and environmentally infeasible (personal communication, Steve Robbins, CVWD, 5/3/02¹).

Impact ITA-3: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD's proposed recharge of Colorado River water, which contains low levels of perchlorate. Recharge with Colorado River water could also introduce low levels of perchlorate into the groundwater near the recharge basins. Perchlorate is an inorganic compound used as an oxidant in solid rocket propellants that interferes with the thyroid gland. Perchlorate enters the Colorado River from industrial drainage into Las Vegas Wash, a tributary to Lake Mead, and has recently been detected at levels of 4 to 6 ppb in Colorado River water delivered to the Coachella Valley. The recent installation of facilities to treat drainage from Las Vegas Wash is expected to significantly reduce the level of perchlorate in Colorado River water.

In 1997, the California Department of Health Services (DHS) set an action level for perchlorate at 18 ppb. On January 18, 2002, the action level was lowered to 4 ppb in response to a draft EPA toxicity assessment. An action level is not an enforceable drinking water standard, but rather a health-based advisory level for chemicals that do not have formal maximum contaminant levels (MCLs). DHS establishes an action level as a guidance tool when they do not have a regulation for a contaminant and want to provide some guidance for utilities. If an action level is exceeded, state law requires the public water system operator to inform its governing body and the regulatory agency. DHS recommends but does not require public notification as well. In March 2002, the

¹ CVWD evaluated the feasibility of reducing the higher TDS of Colorado River water to the equivalent quality of groundwater. Two alternatives were considered: 1) construction of an extension of the SWP into the Coachella Valley; and 2) construction of desalination facilities for Colorado River water. The capital cost of extending the SWP to the Coachella Valley ranged from \$205 million to \$390 million depending on the size of the facility. Total costs (including capital and operations) would range from \$322 to \$406/AF in addition to the cost of acquiring SWP water (about \$200/AF). The capital cost of desalting Colorado River water ranged from \$284 million to \$1.19 billion depending on the size of the facilities and the method of brine disposal. The highest cost identified involved treating all Colorado River water entering the Coachella Valley. The cost of the desalted water ranged from \$184 to \$330/AF in addition to the costs of acquiring the water supplies and delivering them to customers in the Coachella Valley. On the basis of economics alone, these options were found to be economically infeasible (CVWD unpublished data).

In addition to the economics, each of these options is expected to have significant environmental impacts. Environmental impacts include the disturbance of 300 to 400 acres of desert land for pipeline construction, loss of 500 to 3,500 acres of land for brine evaporation ponds, loss of habitat and biological resources, loss of cultural resources along facility alignments, air quality impacts from construction and generation of additional energy for the pump and treatment facilities, additional energy for pumping SWP water or running the desalters, and impacts related to salt disposal (CVWD unpublished data). Considering both costs and environmental impacts, these mitigation measures are considered infeasible.

California State Office of Environmental Health Hazard Assessment proposed a public health goal (PHG) of 6 ppb for perchlorate. A PHG is a concentration at which no adverse health effects would occur after a lifetime of consumption of water at this concentration and is the first step in developing a MCL. No federal drinking water MCL has been established for perchlorate, although U.S. EPA has established 1 ppb as the draft reference dose for adults (DHS 2002).

Mitigation Measure ITA-3: Should recharge of Colorado River water cause any Torres Martinez or Agua Caliente domestic drinking water well to exceed any recognized health-based water quality standard, CVWD will work with the tribe to bring the drinking water supply of the tribe into compliance by either providing domestic water service to the tribe from the CVWD's domestic water system or by providing appropriate well-head treatment.

3.9.4.3 Alternative 1: No Project

LOWER COLORADO RIVER

Under the No Project Alternative, Baseline conditions on the LCR would continue and no impacts to ITAs would occur.

SALTON SEA

Under the No Project Alternative, water levels in the Salton Sea would decline. Water levels are projected to decline from an existing level of -228 to -235 msl (a decline of 7 feet) over the next 75 years. The exposure of this previously inundated area may result in the impacts that are described in Impact ITA-1. However, less acreage would be exposed under the Baseline as compared to the Proposed Project; therefore, the No Project effects on the resources described in ITA-1 would not be as great.

CVWD SERVICE AREA

Water Conservation and Transfer

Under the No Project Alternative, the Proposed Project's second implementation scenario (QSA Implementation) would not occur; therefore, no additional Colorado River water would be provided to CVWD.

3.9.4.4 Alternative 2 (A2): Water Conservation and Transfer of Up To 130 KAFY to SDCWA (On-farm Irrigation System Improvements as Exclusive Conservation Measure)

LOWER COLORADO RIVER

Water Conservation and Transfer

For the same reasons as listed under the Proposed Project, no impacts to ITAs would occur in the LCR geographic subregion with implementation of this Alternative.

SALTON SEA

Water Conservation and Transfer

Impact A2-ITA-1: Exposure of Torres Martinez tribal lands from reduced inflow to Salton Sea as a result of Sea-level decline of about 7 feet. Potential impacts to ITAs would be similar to those described for the Proposed Project. Under Alternative 2, the Sea's elevation is projected to decline to about -242 feet msl with and without implementation of the Salton

Sea Habitat Conservation Strategy; a decline of about 7 feet compared to the Baseline projected elevation of -235 feet msl.

Mitigation Measure A2-ITA-1: See Mitigation Measure ITA-1.

Salton Sea Habitat Conservation Strategy (HCP-SS)

The Salton Sea Habitat Conservation Strategy would maintain inflows to the Sea at or above Baseline levels until approximately year 2030, thereby avoiding any potential Project-related impacts to ITAs until 2035 when the elevation of the Sea would decline below the projected Baseline elevation. After that time, reduced inflows could expose portions of the Salton Sea shoreline as described above under “Water Conservation and Transfer.” By 2077 the Sea’s elevation is projected to decline to about -242 feet msl.

CVWD SERVICE AREA

Water Conservation and Transfer

Under Alternative 2, the Proposed Project’s second implementation scenario (QSA Implementation) would not occur; therefore, no additional Colorado River water would be provided to CVWD.

3.9.4.5 Alternative 3 (A3): Water Conservation and Transfer of Up To 230 KAFY (All Conservation Measures)

LOWER COLORADO RIVER

Water Conservation and Transfer

For the same reasons as listed under the Proposed Project, no impacts to ITAs would occur in the LCR geographic subregion with implementation of this Alternative.

SALTON SEA

Water Conservation and Transfer

Impact A3-ITA-1: Exposure of Torres Martinez tribal lands from reduced inflow to Salton Sea as a result of Sea level decline of about 4 to 12 feet. Potential impacts to ITAs would be similar to the Proposed Project. Under Alternative 3, the Sea’s elevation is projected to be -247 feet msl; a decline of about 12 feet compared to the Baseline, assuming only on-farm and/or water delivery system measures are used to conserve water for transfer. If fallowing is used to conserve water for transfer, the elevation of the Sea is projected to decline to about -239 feet msl; a decline of about 4 feet compared to the Baseline. With implementation of the Salton Sea Habitat Conservation Strategy, if on-farm and/or water delivery system measures are used to conserve water for transfer, the elevation of the Sea is projected to be -246 feet msl. If fallowing is used to conserve water for transfer, the elevation of the Sea is projected to be -239 feet msl with implementation of the Salton Sea Habitat Conservation Strategy.

Mitigation Measure A3-ITA-1: See Mitigation Measure ITA-1.

Salton Sea Habitat Conservation Strategy (HCP-SS)

The Salton Sea Habitat Conservation Strategy would maintain inflows to the Sea at or above Baseline levels until approximately year 2030, thereby avoiding any potential Project-related impacts to ITAs until 2035 when the elevation of the Sea would decline below the projected Baseline elevation. After that time, reduced inflows could expose portions of the Salton Sea shoreline as described above under “Water Conservation and Transfer.” By 2077, the Sea’s elevation is projected to decline to -246 feet msl or -239 feet msl for the on-farm and/or water delivery system or fallowing conservation and transfer scenarios (described above) respectively.

As described in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

CVWD SERVICE AREA

Water Conservation and Transfer

Same as Impact ITA-2: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD’s proposed recharge of higher TDS Colorado River water. As stated under Impact ITA-2, potential effects on groundwater within the CVWD service area could occur with implementation of the Proposed Project (QSA Implementation scenario).

Mitigation Measure A3-ITA-2: See Mitigation Measure ITA-2.

Same as Impact ITA-3: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD’s proposed recharge of Colorado River water, which contains low levels of perchlorate. As stated under Impact ITA-3, recharge with Colorado River water could introduce low levels of perchlorate into the groundwater in the CVWD service area near the recharge basins.

Mitigation Measure A3-ITA-3: See Mitigation Measure ITA-3.

3.9.4.6 Alternative 4 (A4): Water Conservation and Transfer of Up To 300 KAFY to SDCWA, CVWD, and/or MWD (Fallowing As Exclusive Conservation Measure)

LOWER COLORADO RIVER

Water Conservation and Transfer

For the same reasons as listed under the Proposed Project, no impacts to ITAs would occur in the LCR geographic subregion with implementation of this Alternative.

SALTON SEA

Water Conservation and Transfer

Impact A4-ITA-1: Exposure of Torres Martinez tribal lands from reduced inflow to Salton Sea as a result of Sea level decline of up to about 6 feet. Potential impacts to ITAs would be the same as described for the Proposed Project if fallowing is used as the sole method for conserving water for transfer. Under Alternative 4, the Sea’s elevation is projected to decline to about -241 feet msl; a decline of about 6 feet compared to the Baseline. With implementation of the

Salton Sea Habitat Conservation Strategy the elevation of the Sea is projected to be –240 feet msl.

Mitigation Measure A4-ITA-1: See Mitigation Measure ITA-1.

Salton Sea Habitat Conservation Strategy (HCP-SS)

The Salton Sea Habitat Conservation Strategy would maintain inflows to the Sea at or above Baseline levels until approximately year 2030, thereby avoiding any potential Project-related impacts to ITAs until 2035 when the elevation of the Sea would decline below the projected Baseline elevation. After that time, reduced inflows could expose portions of the Salton Sea shoreline as described above under “Water Conservation and Transfer.” By 2077, the Sea’s elevation is projected to decline to about –240 feet msl.

As described in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

CVWD SERVICE AREA

Water Conservation and Transfer

Same as Impact ITA-2: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD’s proposed recharge of higher TDS Colorado River water. As stated under Impact ITA-2, potential effects on groundwater within the CVWD service area could occur with implementation of the Proposed Project (QSA Implementation scenario).

Mitigation Measure A4-ITA-2: See Mitigation Measure ITA-2.

Same as Impact ITA-3: Adverse impact to groundwater resources of Torres Martinez and Agua Caliente Tribes from CVWD’s proposed recharge of Colorado River water, which contains low levels of perchlorate. As stated under Impact ITA-3, recharge with Colorado River water could introduce low levels of perchlorate into the groundwater in the CVWD service area near the recharge basins.

Mitigation Measure A4-ITA-3: See Mitigation Measure ITA-3.